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MODIFICATION OF A FIRST GRADER'S ATTENDING BEHAVIOR IN COUNSELING AND IN THE CLASSROOM.

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A REINFORCEMENT TECHNIQUE IN COUNSELING WAS USED TO MODIFY A FIRST GRADER'S ATTENDING BEHAVIOR. PRE AND POST MEASUREMENTS WERE MADE AND CUMULATIVE RECORDS WERE KEPT OF THE ATTENDING TIME IN COUNSELING SESSIONS AND IN ARITHMETIC LESSONS, AND A RECORD WAS KEPT OF COMPLETION VERSUS NON-COMPLETION OF ARITHMETIC ASSIGNMENTS. THE ASSESSMENTS MADE IN REGARD TO THE ARITHMETIC LESSONS ENABLED AN INVESTIGATION OF TRANSFER EFFECTS FROM COUNSELING TO THE ACADEMIC AREA. AN INVESTIGATION OF TRANSFER EFFECTS WAS ALSO INFORMALLY MADE RELATIVE TO OTHER SCHOOL SITUATIONS. RESULTS SHOWED INCREASED ATTENDING BEHAVIOR IN COUNSELING AND IN THE CLASSROOM, AND A MARKED IMPROVEMENT IN COMPLETION OF ASSIGNMENTS, AND WERE INTERPRETED AS SUPPORTING THE USE OF A BEHAVIORAL APPROACH IN ELEMENTARY SCHOOL COUNSELING. (AUTHOR)

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MODIFICATION OF A FIRST GRADER'S ATTENDING BEHAVIOR IN COUNSELING AND IN THE CLASSROOM

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INTRODUCTION

The use of behavioral models in applied psychology appears to be growing rapidly. Recent books illustrate this growth in the clinical area (Krasner & Ullmann, 1965; Ullman & Krasner, 1965) and in the learning area (Staats, 1964; Staats & Staats, 1963). There has thus far been relatively little interest shown in the behavior modification approach in the counseling area, although the work of Krumboltz and his associates is a major exception (Krumboltz, 1964, 1965; Krumboltz & Hosford, 1966; Krumboltz & Schroeder, 1965; Krumboltz & Thoresen, 1964; Ryan and Krumboltz, 1964). The purpose of this paper is to present a case study in which a behavioral approach was used in counseling, and in which the problem of transfer from the counseling sessions to the classroom was investigated.

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Patterson (1965) has pointed out that the transfer of training from the conditioning situation to other life situations is a major problem in behavior modification.

This was an exploratory study, in that the writer was interested in investigating the feasibility of a behavioral approach to counseling with young children.

PROBLEM

D.R., a first grade pupil, age six at the beginning of this study, was of concern to his classroom teacher and to his specialist teachers in the areas of art, music, and physical education. Each of these teachers reported that the boy did not pay attention in class, did not follow directions well, tended not to complete assignments, seldom made eye contact with others, seldom smiled, and had no close friends. These problems were also observed by the school counseling psychologist, and school records showed that similar problems had been reported by previous teachers in kindergarten and preschool. D.R. had earned a WISC Full Scale IQ of 117, and came from an upper-middle class home.

The school personnel involved desired more positive classroom behavior from this boy and better social adjustment. A desire for better attending behavior was most frequently mentioned by the teachers. It was decided that D.R. would receive individual counseling at school, and that an effort would be made to determine whether the effects of the counseling appeared to carry over to the classroom.

PROCEDURE

Pre- and Post- Experimental Measurements

A percentage cumulative record of attending time was calculated for

each counseling session. (Criteria for attending behavior in counseling will be discussed below). The average attending time for the first five counseling sessions was calculated as a pre-measure and the average attending time for the last 5 sessions was calculated as a post-measure.

The boy's daily arithmetic lessons were used for the purpose of investigating for possible transfer effects. Arithmetic lessons were selected because they provided a routine and well-structured opportunity for observation. Prior to beginning counseling sessions, the experimenters observed D.R. for 9 consecutive arithmetic lessons. The first 3 observations involved categorizing the boy's behavior into attending vs. non-attending behavior categories. The following are examples of behaviors classed as attending: looking at teacher or chalkboard while teacher is explaining or demonstrating lesson, lesson connected interaction with other students, looking at other students while they answer questions, volunteering to answer, counting on fingers, and working problems in workbook. The following are examples of behaviors classed as non-attending: looking away from lesson at other students, paintings on the walls, etc.; non-lesson connected interactions with other students, such as poking, butting, punching others; manipulating non-lesson connected objects while not engaged in any behavior classed as attending; and motor behavior incompatible with attending to lesson, such as lying on desk or floor. In general, any lesson-connected behavior was classed as attending, while any non-lesson connected behavior was classed as non-attending.

The last 6 pre-counseling observations were for the purpose of obtaining a pre-experimental measure of attending time in the arithmetic lessons. Each observer used a stop watch which remained running as long as D.R. attended,

but which was turned off whenever he engaged in non-attending behavior. Thus, ratio of attending time to total lesson time yielded a percentage measure of attending time. The percentages obtained by each observer were averaged for each lesson.[1] A total average for the 6 lessons was also calculated.

When the counseling sessions were begun the psychologist no longer observed D.R. in his classroom. This step was taken to show that any evidence of transfer from counseling to the arithmetic lessons could not be the result of the counselor's presence in the classroom. Patterson (1965) has provided evidence that an experimenter may come to function as a discriminative stimulus for an S. At this point in the study, the other experimenter observed the arithmetic lessons alone, and kept a cumulative record of percentage of attending time. The average percentage of attending time for the last 6 arithmetic lessons observed constituted the post-experimental measure of transfer. Counseling sessions were terminated just prior to this post-experimental measurement. A total of 28 arithmetic lessons were observed, including the pre- and post- experimental observations, over a period of 6 weeks.

A record was also kept as to whether or not D.R. completed the wirtten work expected of him during the arithmetic lessons. Most of the lessons included the assignment of one or more pages of work in an arithmetic workbook. A record was kept by the teacher and the classroom observer as to whether D.R. completed these assignments.

The arithmetic section of the Wide Range Achievement Test (Jastak, 1946) was administered about two weeks prior to the beginning of this study, and

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[1]A check for inter-rater observer agreement was made: product moment r= .97.

D.R. earned a grade score of 2.5. Thus, the boy's actual arithmetic achievement was above grade level, in spite of his poor attention and his tendency not to complete assignments.

Informal Appraisals

During the week following termination of the counseling sessions, the art, music, and physical education teachers were informally interviewed to obtain their impressions of D.R.'s adjustment at that time. Similar interviews were also held four months later. This four-month follow-up came one month after the beginning of the next school year.

Counseling Sessions

Seventeen counseling sessions were conducted over a 4-week period. The length of these sessions varied from 10 to 27 minutes. The shorter periods were during the early part of the study. For example, non of the sessions during the first 2 weeks were longer than 15 minutes, while none of the sessions during the second 2 weeks were shorter than 20 minutes.

The most frequent topics discussed in counseling were: why it is important to pay attention in class, why it is important to do things in order, how to have friends, sibling relations, and practicing for "show and tell" time. During the first week of counseling the boy frequently exhibited such behaviors as lying on the desk with head in arms, sitting or lying on the floor, standing on his chair and looking out the window, and rummaging through the counselor's bookcase. Thus, it was decided to introduce a systematic application of concrete reinforcement in an attempt to obtain better attention.

Reinforcement was introduced during the sixth counseling session on a fixed-interval basis. D.R. was given a piece of candy for each minute of attending time accumulated during a session. A stop watch was used for this purpose. There were two major aspects of the criteria established for attending time. Whenever D.R. maintained eye contact with the counselor he was given credit for attending time, regardless of other behavior exhibited, such as sitting on the floor, etc. When eye contact was not maintained he had to be sitting in his chair looking in the general direction of the counselor to accumulate attending time. This reinforcement procedure was explained to the boy. He knew that the stop watch would remain running as long as he maintained eye contact or sat in his chair looking toward the counselor, and that he would receive a piece of candy for each minute accumulated. During the first 3 sessions after introducing reinforcement, a piece of candy was placed in front of D.R. immediately after each minute of attending time that accumulated on the stop watch. Thereafter, the candy earned was administered at the end of each session. He was also given verbal praise and smiles for success in attending. Candy reinforcers were also given on a variable-ratio schedule for smiling behavior; but no attempt was made to keep a quantitative record of frequency of smiling.

RESULTS

Quantitative results only will be presented here. Qualitative findings will be considered in the discussion section below.

Pre- and post- experimental comparisions of attending time in the counseling sessions are presented in Table 1. There was a 22 percent gain in attending time in the counseling sessions. Figure 1 shows the cumulative record of attending time in the counseling sessions. It may be seen that the general picture is one of steady improvement.

Table 1

Pre and Post Comparisons of

Attending Time in the Counseling Sessions

and Arithmetic Lessons

	Pre	Post	Difference
Counseling Sessions	54%	76%	22%
Arithmetic Lessons	64%	78%	14%

[Insert Figure 1 here]

Pre and post comparisons of attending time in the arithmetic lessons are shown in Table 1. There was a gain of 14% in attending time. Figure 2 presents a cumulative record of attending time in the arithmetic lessons. While this record is one of considerable up and down movement, it may be seen that the general picture is one of improvement. Table 2 presents a record of completion vs. non-completion of assignments during the arithmetic lessons. It may be clearly seen that the improvement in regard to completion of assignments is quite marked.

[Insert Figure 2 here.]

Table 2

Completion vs. Non-completion of Assignments

During the Arithmetic Lessons

Lesson	Completed	Not Completed	Lesson	Completed	Not Completed
*1			15		X
2			16		X
3		X	17	X	
4			18	X	
5		X	19	X	
**6		X	20	X	
7			21	X	
8		X	22	X	
9			23	X	
10		X	24		X
11	X		25	X	
12		X	26	X	
13		X	27	X	
14		X	28	X	

*Blank spaces indicate lessons where the completion vs. non-completion comparison was not applicable.

**Counseling was begun on the day of this lesson, after the lesson was conducted.

DISCUSSION

Attending time increased considerably in the counseling sessions after the introduction of a systematic reinforcement procedure. This made it possible to discuss with D.R. such topics as why it is important to pay attention in class, how to have friends, etc., which seemed to be disturbing to him. Prior to the use of candy reinforcers, he was extremely inattentive when such topics were posed for discussion, although he was more attentive when discussing such innocuous topics as the lunch menu and favorite games.

Thus, the counseling sessions involved features of both a behavioral approach (systematic reinforcement of desired behavior) and of a more traditional face-to-face interview type of counseling. However, the face-to-face interviewing, or conversation with the boy, tended also to involve features of the behavioral approach. For example, when discussing the topic of what helps to have friends, D.R. decided that smiling more frequently would help. He practiced smiling during the counseling sessions and was rewarded for doing so. The rationale for this was that practice in and reinforcement of smiling would result in a stronger habit of smiling. Amount of spontaneous smiling seemed to increase during the counseling sessions, but an objective record of this was not kept.

The administration of reinforcement for attending behavior was on a fixed schedule throughout the counseling contacts. Ideally, for purposes of maximizing the persistence of the increased attending behavior, a variable schedule of reinforcement would have been introduced before termination of counseling (Michael & Meyerson, 1962). However, in the present case this was not possible since the school year ended before the increased attending behavior seemed well enough established to justify such a change in the reinforcement schedule.

The problem of transfer of any behavior change achieved in the counseling situation to the classroom was under special scrutiny in this study. It would not be possible with the present design to show definitely whether any transfer occurred, but provisions were made to obtain evidence on this matter. Both the increase in attending time in the classroom and the progress made in regard to completion of assignments provide evidence that positive transfer did occur. Regarding completion of assignments, Table 2

shows that D.R. completed no arithmetic assignments prior to lesson 11. (Counseling sessions were started on the same day that lesson 6 was held). The children in this class were permitted to go out to play for a few minutes when their arithmetic worksheet assignments for the period were completed. By lesson 17, D.R. began completing his assignments consistently, and for 5 subsequent days he was among the first 50 percent of the children earning the privilege to leave the room early. A plausible explanation for this is that once the boy had experienced the privilege of leaving the class early to play, a potent reinforcer for attending had come into operation relative to the arithmetic lessons.

During the week following termination of the counseling sessions, the art, music, physical education, and regular classroom teachers were informally asked for their impressions as to D.R.'s current school adjustment. Each of these teachers reported improved adjustment. Interestingly, these teachers spontaneously and independently gave the following reasons for their opinions: more positive social interactions, increased eye contacts, and more frequent smiling. Two of these teachers (including the regular classroom teacher) also reported that D.R. now paid attention better in class, followed directions better, and was now more likely to complete his work. The teachers made essentially the same reports at the time of the four-month informal follow-up interviews.

The general picture, both in terms of quantitative and qualitative assessments, was one of improved school adjustment and positive transfer from counseling to other school situations. This study lends support to the use of a behavioral model in elementary school counseling.

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ABSTRACT

A reinforcement technique in counseling was used to modify a first grader's attending behavior. Pre and post measurements were made and cumulative records were kept of attending time in counseling sessions and in arithmetic lessons, and a record was kept of completion vs. non-completion of arithmetic assignments. The assessments made in regard to the arithmetic lessons enabled an investigation of transfer effects from counseling to the academic area. An investigation of transfer effects was also informally made relative to other school situations. Results showed increased attending behavior in counseling and in the classroom, and a marked improvement in completion of assignments, and were interpretated as supporting the use of a behavioral approach in elementary school counseling.